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Channel Islands CALIFORNIA STATE UNIVERSITY

3D-IC Global Shutter Image Sensors: HDR and More with High Quality Image Capture

By Lester Kozlowski

July 28, 2016

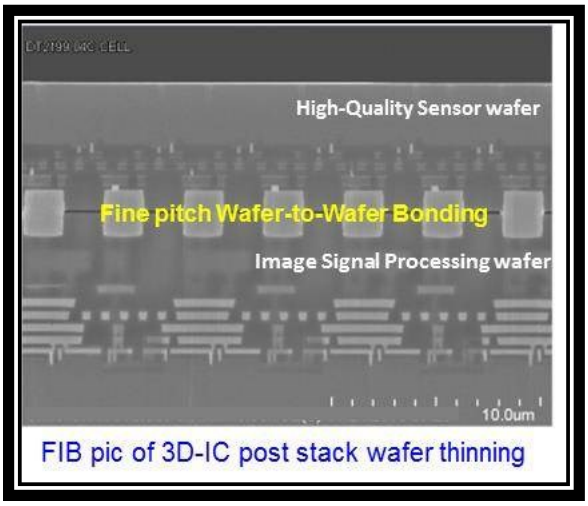
6:30 pm (pizza and networking), 7 pm talk

California State University Channel Islands

One University Drive, Camarillo, CA 93012, Del Norte Hall, Room 1500

Meetings are free and open to the public

RSVP at this link or https://globalshutterimagesensors.eventbrite.com



FIB pic of 3D-IC post stack wafer thinning

Mr. Les Kozlowski will discuss the imminent debut of stacked image sensor products delivering unprecedented image quality from newly developed global shutter fabrication and circuit technology. The high-quality, low-noise, global shutter image sensors are the answer to what comes next in the roadmap for commercial CMOS image sensors (CIS). While global shutter image sensors were a goal of even the earliest pioneers of MOS-based technology, such as Mr. Peter Noble and his seminal UK image sensor team in the late 1960s, high quality global shutter devices have simply been unavailable until just recently. Even the latest such devices have noise higher than competing rolling shutter devices along with inferior parasitic image suppression. The key is the use of advanced stacked sensor technology and unique circuit solutions together enabling competitive pixel sizes while eliminating reset noise and parasitic image formation. Furthermore, global shutter image capture greatly improves video quality with less complex (cheaper) image signal processors for emerging HDR cameras.

Mr. Les Kozlowski is currently Founder, President and CEO of AltaSens, a company that introduced the world's first high-performance CIS sensors to professional HDTV cameras in 2004 and ultimately became the largest supplier of CIS for HDTV videoconferencing systems. His current focus is on helping to lead AltaSens, which was acquired by JVC Kenwood in 2012, and its world class camera partners to proliferate the ultimate near-term CIS solution: low-noise, high-quality global shutter technology. Les received his B.S. and M.S. degrees in Electronic Engineering with emphasis on Electromagnetic Engineering in 1975 and 1977. He has nearly forty US patents including five devoted to the stacked global shutter, along with over 150 publications in various journals and proceedings. He also co-authored a chapter on infrared sensor technology with the late, esteemed Dr. Walter Kosonocky for the last two editions of the Optics Handbook. Topics included infrared focal plane arrays manufactured at his prior employers, Rockwell Scientific and Hughes Aircraft, using earlier stacked sensor technologies.